

# ENERGY IS EVERYWHERE!

U.S. DEPARTMENT OF  
**ENERGY**

Energy Efficiency &  
Renewable Energy



## Better Buildings Challenge

February 19, 2015



Webinar Series sponsored by  
Housing and Urban Development,  
Department of Energy and  
Department of Education

# Webinar Agenda

- Welcome and Intro to Webinar Series (HUD)
- Overview of Better Buildings Challenge
- How to Join
- Q & A

You are on mute! Use your webinar bar to fill out poll or chat to send in a question.



Email [Erin.Twamley@ee.doe.gov](mailto:Erin.Twamley@ee.doe.gov) about  
the  
Energy is Everywhere Webinar Series

# Welcome

- Energy Is Everywhere Webinar Series
- **Today: Better Buildings Challenge**
- Launched by President Obama in December of 2011
- Goal: to improve the efficiency of American commercial, institutional, and multifamily buildings and industrial plants by 20 percent or more over ten years.
- Headed by Dept. of Energy
- Mix of federal, corporate, educational, state and local partners





# Better Buildings Challenge Multifamily Sector Update

Kevin J. Bush  
Multifamily Sector Lead

# Better Buildings Challenge

## Goals

- Make commercial, industrial buildings & multifamily housing 20%+ more efficient over 10 years
- Save \$80B+ annually for US organizations
- Create American jobs, improve energy security, and mitigate impacts of climate change

## How

- Leadership
- Results
- Transparency
- Best Practice Models
- Recognition
- Catalyzing Action

## Progress

- 190+ partners and allies
- 3.3+ billion square feet, 600 manufacturing plants
- 70+ showcase projects; 40+ implementation models
- 2.5% average annual improvement in energy intensity
- \$300 million in savings since Better Buildings Challenge launched
- 8 goal achievers

# President Obama's Climate Action Plan

- Prepare the U.S. for the impacts of climate change
- Lead international efforts to address climate change
- Cut carbon pollution in America



*President Obama announcing his Climate Action Plan in June 2013*

# Expanding to Multifamily



Create strong, sustainable, inclusive communities and quality affordable homes for all.



Ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions.

# Multifamily Sector Overview

## Opportunity

- Untapped market, large investment opportunity
- High energy costs for tenants and owners
- Retrofits are cost effective

## Barriers

- Complicated ownership structure
- Limited financial incentive
- Limited capacity
- Difficult to benchmark and track
- Resident engagement
- Lack of capital

Three main sub-sectors: public housing, subsidized, and market rate



# Better Buildings Challenge Partner's Commitment

- Conduct an energy efficiency assessment of their building portfolio and pledge an organization-wide energy savings goal of at least 20% within 10 years
- Take action by showcasing energy efficiency projects and implementation models
- Report results by sharing energy performance data that demonstrates success



*Denver Housing Authority, 2.5 MW Power Purchase Agreement*

# Better Buildings Challenge

## Federal Support

- Offer technical assistance to support energy commitments
- Provide national recognition for achieving energy efficiency results
- Establish a community of energy efficiency stakeholders
- Work to address market and policy barriers multifamily owners experience when greening their properties



*Housing Authority of Baltimore City, 30% savings through resident engagement*

# Better Buildings Challenge

## Federal Support

- Offer technical assistance to support energy commitments
- Provide national recognition for achieving energy efficiency results
- Establish a community of energy efficiency stakeholders
- Work to address market and policy barriers multifamily owners experience when greening their properties
- Direct support from experienced professionals
- Must help meet energy commitment
  - Diagnostic building assessments
  - Design specs., construction review
  - Green O&M, resident engagement
  - Portfolio planning
  - Benchmarking & energy mgt.

# Better Buildings Challenge

## Federal Support

- Offer technical assistance to support energy commitments
  - Provide national recognition for achieving energy efficiency results
  - Establish a community of energy efficiency stakeholders
  - Work to address market and policy barriers multifamily owners experience when greening their properties
- HUD's Office of Multifamily Housing Programs
    - Management Add-on Fees
    - Reserve for Replacement
    - Mark to Market
    - PRAC Pay for Success
    - *On-Bill Financing and Repayment*
    - *Increased Distributions*
  - HUD's Office of Public and Indian Housing
    - 45 day EPC reviews



# Partners Showcasing Innovative Solutions

- Major retrofits
  - New Bedford Housing Authority
  - WinnCompanies
  - SAHF members
  - Community Housing Partners
- Passive design
  - Aeon
  - REACH CDC
- Resident engagement
  - Housing Authority of Baltimore City
- Renewable energy
  - Denver Housing Authority



*Aeon, passive design expected to result in 34% savings over code*

# North Lincoln Homes – Denver Housing Authority

- **Background**
  - Desire to add solar to existing portfolio
- **Solutions**
  - Public private partnership
  - Power purchase agreement
  - 10,400 solar panels installed
- **Other Benefits**
  - Green jobs
  - Predictable energy cost
- **Actual Energy Savings**
  - 19 percent
  - \$12,000



*Source: Housing Authority of the City and County of Denver*

# The Landing Apartments - Aeon

- **Background**
  - New construction
  - Meet demand for senior housing
- **Solutions**
  - Super insulation
  - Building orientation
  - Geothermal
  - Solar control
  - Integrated design
- **Other Benefits**
  - Access to services
  - Green Communities
- **Expected Energy Savings**
  - 34 percent over code
  - \$23,000 annually



*Source: Aeon Housing*

# McKeesport Downtown – ACTION Housing

- Background
  - Former YMCA
  - Built in 1922
- Solutions
  - Geothermal
  - Building envelope
  - Low flow fixtures
  - Energy STAR appliances
- Other Benefits
  - More amenities
  - A/C
  - ADA compliant
- Expected Energy Savings
  - 46 percent
  - \$24,000 annually



Source: ACTION Housing



# Vista del Mar – Buenaventura Housing Authority

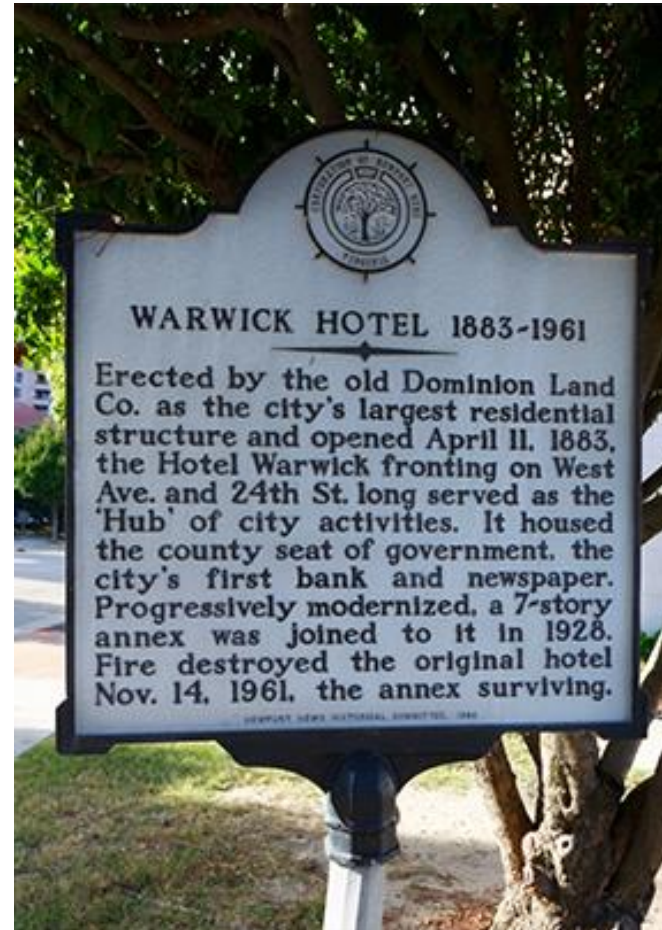
- Background
  - 75 unit high-rise
  - Built in 1963
- Solutions
  - LED lighting
  - HVAC upgrades
  - Solar thermal
  - Energy STAR appliances
- Other Benefits
  - Lighting/safety upgrades
  - Resident comfort
- Expected Energy Savings
  - 21 percent
  - \$8,900



*Source: Housing Authority of the City of San Buenaventura*

# The Warwick Hotel – Community Housing Partners

- Background
  - Former hotel
  - Built in 1883
- Solutions
  - VRF HVAC
  - Windows
  - Water heaters
  - ERV units in each apt
- Other Benefits
  - IAQ
  - Resident services
- Actual Energy Savings
  - 48 percent
  - \$43,000 annually



Source: Community Housing Partners

# Castle Square – WinnDevelopment

- Background
  - Critical affordable housing resource
  - 1960s
- Solutions
  - Resident engagement
  - Super-insulated shell
  - Insulated reflective roof
  - High-efficiency windows
- Other Benefits
  - Resident comfort
  - ENERGY STAR
- Actual Energy Savings
  - 36 percent
  - \$213,000 annually



Source: WinnDevelopment

# City Gardens Apartments – LINC Housing

- Background
  - 274 garden style apts
  - 1969, rehab in 1996
- Solutions
  - Occupancy sensors
  - PV for common space
  - Rate-payer funds
  - Fannie Mae Green Refi+
  - Solar hot water
- Other Benefits
  - Resident comfort
  - Lower cost of living
- Actual Energy Savings
  - 14 percent
  - \$22,876 annually



Source: LINC Housing



# Allowable Management Add-on Fees

- Memorandum from DAS for Multifamily on 4/24/14
- BBC Multifamily Partners are eligible for management add-on fees in the following categories:
  - Operations and Maintenance
  - Tenant Engagement
  - Data Collection
  - Benchmarking
- BBC Owners/Agents submit a revised Management Certification (Form HUD 9839-A or B, Attachment 1) and their BBC Partnership Agreement to the appropriate Multifamily Hub/Program Center
- Minimum of \$1 /PUPM and maximum of \$5,000 per property per year

Questions? [MFBBC@HUD.GOV](mailto:MFBBC@HUD.GOV)

# Expedited R4R Releases

- Memorandum from DAS for Multifamily on 6/12/14
- Properties that are part of BBC MF Partners portfolio are eligible for expedited processing for energy and water efficiency improvements
- Some properties are ineligible
- Takes 7-15 business days
- All requests must be accompanied by a print out of the Partner's profile page from the BBC website and a short description of the applying entity's relationship to the Partner

Questions? [MFBBC@HUD.GOV](mailto:MFBBC@HUD.GOV)

# Mark-to-Market Incentive Performance Fee Increase

- Memorandum from DAS for Multifamily on 6/12/14
- Targeted at older M2M properties undergoing rehabs
- Brings Incentive Performance Fee in line with newer M2M Green Initiative Properties

Questions? [MFBBC@HUD.GOV](mailto:MFBBC@HUD.GOV)

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**HEAD TO**

**[ENERGY.GOV/BETTERBUILDINGSCHALLENGE](https://energy.gov/betterbuildingschallenge)**

**TO LEARN ABOUT GETTING  
INVOLVED.**



# Questions and Contact Us

**Questions: Type in the chat box or raise your hand.**

**We are interested in your feedback on the Energy Is Everywhere Series!**

**[energyliteracy@ee.Doe.gov](mailto:energyliteracy@ee.Doe.gov)**